**Virginia Department of Conservation and Recreation Comments on**

**The DRAFT Chesapeake Bay Total Maximum Daily Load,**
**United States Environmental Protection Agency, Dated September 24, 2010**

## Docket Number EPA-R03-OW-2010-0736

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The Virginia Department of Conservation and Recreation submits the following comments on the draft Chesapeake Bay TMDL:

### Evaluation of Milestone Results

The attainment of aggregate milestone load reductions is more critical that individual results of each milestone strategy states or D.C. might elect to utilize.

*Recommendation: EPA should evaluate state progress in meeting specific milestone goals based on aggregate reductions for nitrogen, phosphorus, and sediment rather than the success of each individual strategy or sector in achieving reductions.*

### James River Draft Sediment Allocations

EPA indicates that draft sediment allocations were derived in part based on the magnitude of nutrient allocations for watersheds and segments. While this may be a reasonable interim approach for most watersheds, it is not at all appropriate in the James River since it: (1) is a wastewater treatment point source dominated basin that is not representative of most basins in the watershed regarding the mix of nonpoint and point source inputs, and (2) has a nutrient related local impairment. The local chlorophyll-a related impairment is caused by nutrient loads rather than attributable to sediment loads.

*Recommendation: If EPA uses similar methodology to derive final sediment allocations as were used to develop draft sediment allocations, Virginia recommends that final sediment allocations for the James River be based on the dissolved oxygen impairment levels of allowable nutrient loads rather than a sediment load based on chlorophyll-a related nutrient reductions. Alternatively, EPA could develop the sediment allocations based on the needed reductions for sediment to attain only clarity water quality standards in the James.*

## Subsector Equity of Stormwater Allocations

Several subsectors exist for the urban stormwater source sector category. For equity reasons, it is important that EPA's allocations fairly distribute the load among these subsectors.

*Recommendation: For any EPA allocations or backstops to urban stormwater, the allocations need to apply equitably across regulated urban stormwater subsectors such as MS4 permits and Industrial Stormwater permits.*

## Phase 5.3.0 Watershed Model (WSM)

o The definition of the so called E3 scenario (theoretical maximum implementation or everyone doing everything everywhere) eliminates all acres of the animal feeding operation, nursery, harvested forest, barren or constructive, and extractive or surface mining land uses. These land uses are simulated as hay without nutrients or forest. How does one have an animal feeding operation that produces run-off characteristics similar to a pristine environment?

*Recommendation: Redefine E3 as it is applied to the following land use categories: animal feeding operation, nursery, harvested forest, barren or constructive, and extractive such that these land uses still would exist and be treated with high levels of BMPs rather than eliminate the individual land use and its associated industry or sector.*

o Some assumptions governing the use and outputs of the phase 5.3.0 WSM are not clearly documented. There is no documentation of the model code changes EPA has done to the phase 5.3.0 WSM since they declared it a calibrated model.

*Recommendation: EPA needs to provide better documentation of phase 5.3.0 WSM assumptions and processes.*

o Urban Land uses appear to be mischaracterized. There is a significant difference between simulated urban acres and what localities have records of actually existing in relation to impervious surface acreages. This is in the order of 600,000 acres of urban lands being simulated as forest in the Virginia Bay drainage. This has significant potential impact on MS4 WLAs estimated from the watershed model (WSM). Acknowledged as a significant error by EPA and will require a new calibration to address. Since the loadings and land use acres are a sum zero game by definition EPA has mischaracterized all nonpoint loading sources (land uses) in this model.

*Recommendation: EPA needs develop and utilize more accurate methods to closely reflect actual land uses.*

o Agricultural nutrient management (NM) produced approximately 20% of all nonpoint source reductions in the Tributary Strategies. Agricultural NM in the phase 5.3.0 WSM produces a reduction in three Virginia Counties (Accomack, Rockingham, and Page) only with application to all other counties having no effect or slight increases in loadings. This change in the estimated impacts of this BMP was done by EPA in complete disregard to the established EPA protocol for BMPs in EPA's Chesapeake Bay watershed modeling. In response to the concern expressed by Virginia and other states in the watershed, EPA suggested using enhanced NM and decision agriculture as surrogate BMPs to represent nutrient management in model runs. These are poor replacements. Additionally, how the scenario builder model handles these surrogates appears to be incorrect. These are BMPs that are should be added onto an existing NM plan. Scenario Builder treats these BMPs as land use change BMPs instead of an efficiency added onto the NM BMP.

*Recommendation: EPA needs to modify the model and scenario builder to reflect the reduction benefit of nutrient management. EPA needs to treat nutrient management as an efficiency BMP rather than a land use change.*

o The percentage cover by land use used in the calibrations are not logical for all land use categories. This reduces confidence in the calibrated sediment loadings and associated nutrients particularly total phosphorus. An example in the current phase 5.3.0 WSM is the degraded stream corridor land use has identical percentage cover (total interceptive surface) to pasture. Pasture should have a higher percent cover than degraded stream corridor.

*Recommendation: Reduce the percent cover for the degraded stream corridor as compared to the standard pasture land use.*